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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/432,272	11/02/1999	TOSHIHISA SARUTA	4947-0086-2	9838

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EXAMINER

NGHIEM, MICHAEL P

ART UNIT

PAPER NUMBER

2861

DATE MAILED: 06/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/432,272

Applicant(s)

SARUTA ET AL.

Examiner

Michael P Nghiem

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 December 2001 and 15 April 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9, 11-20 and 23-93 is/are pending in the application.
- 4a) Of the above claim(s) 4, 24-34, 45-54, 59-71 and 78-93 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 6, 11-20, 23, 35-39, 55-58 and 72-77 is/are rejected.
- 7) ☒ Claim(s) 7-9 and 40-44 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6,8-11,20
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restriction***

1. Applicant's election without traverse of Group I, claims 1-86 and 90-93 and Species I of Figs. 1-13b, claims 1-3, 5-9, 11-20, 23, 35-44, 55-58, 60-62, and 72-77 in Paper No. 21 is acknowledged. Claims 4, 11/4, 12/4, 13/12/4, 23/4, 24-34, 45-54, 59, 63-71, and 78-93 are withdrawn from further consideration as being directed to a non-elected invention. Furthermore, claims 60-62 are withdrawn from consideration since they depend on non-elected claim 59.

***Specification***

2. The disclosure is objected to because of the following informalities:  
- "182" (page 35, lines 11, 13) should be -- 192 --.  
Appropriate correction is required.

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Claims 3 and 38, "the ink quantity information storage area has a storage capacity of at least three bytes" is not supported by the specification.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5, 11-20, 23, 35-38, 55-58, 72-77 are rejected under 35 U.S.C. 102(b) as being anticipated by Murray et al. (US 5,610,635).

Murray et al. discloses all the claimed features of the invention including:

- an inkjet printer (Fig. 1) and a method of writing plural pieces of specific information into an ink cartridge (52) configured to be detachably attached to the printer (Fig. 1), said ink cartridge comprising:

- an ink reservoir (reservoir of 52) in which an ink used for printing is kept;
- a storage unit (48) storing specific information in a readable, writable, and non-volatile manner (EPROM or flash, Abstract, lines 13-14), wherein the specific information comprises an ink quantity-relating information relating to a quantity of ink kept in said ink reservoir (Abstract, lines 12-13),
- wherein the storage unit is sequentially accessed in synchronism with a clock signal (via clock of 91), and has an ink quantity information storage area storing the ink

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quantity-relating information (area of 48), and wherein the ink quantity information storage area is located at a specific area accessed first by said printer (column 9, lines 51-65);

- said ink reservoir has at least three ink chambers (Fig. 1), in which at least three different color inks are kept respectively, the ink quantity information storage area having a plurality of memory divisions, wherein the plurality of memory divisions store pieces of information relating to quantities of the at least three different color inks kept in said respective ink chambers independently, a storage capacity of at least one byte being allocated to each of the plurality of memory divisions (ink chambers 40's and 48's of each);

- the ink quantity-relating information regards a cumulative amount of ink consumption with regard to said ink reservoir (column 9, line 54);

- the plural pieces of information on remaining quantities of the different color inks are calculated by said printer (column 9, lines 56-57);

- said storage unit is an EEPROM (Abstract, line 14),

- writing the ink quantity-relating information into said storage element, preferentially over the other pieces of specific information (memory is updated with new data);

- an address counter (89) that outputs a count in response to a clock signal output from said printer;

- said storage element stores format information relating to items of information stored therein (column 10, lines 1-16).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murray et al. in view of Shimada et al. (US 6,086,193).

Murray et al. further discloses that the ink quantity information storage area has a storage capacity of at least five bytes (column 10, lines 1-7), the ink quantity information storage area having a plurality of memory divisions (for storing the above data).

However, Murray et al. does not disclose the ink reservoir having at least five ink chambers, in which at least five different color inks are kept respectively.

Nevertheless, Shimada et al. discloses an ink reservoir having at least five ink chambers (column 3, lines 28-35), for the purpose of storing at least five different color inks (column 3, lines 30-31).

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Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide Murray et al. with five ink chambers as disclosed by Shimada et al. for the purpose of storing at least five different color inks.

***Allowable Subject Matter***

6. Claims 7-9 and 40-44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Reasons For Allowance***

7. The combination or method as claimed wherein the memory divisions for storing the pieces of information regarding the three deep color inks being located at a first place written first by said printer, and the memory divisions for storing the pieces of information regarding the two light color inks being located at a second place written next by said printer (claims 7, 40) is not disclosed, suggested, or made obvious by the prior art of record.

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**Contact Information**

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Nghiem whose telephone number is (703) 306-3445. The examiner can normally be reached on M-H from 6:30AM – 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached at (703) 308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-5841 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

  
**MICHAEL NGHIEM**  
**PRIMARY EXAMINER**

Michael Nghiem

June 19, 2002